

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Frank Vanselow

Docket: TID-29699

Serial No.: TBD

Examiner: TBD

Filed: Herewith

Art Unit: TBD

For: Circuit Assembly for Generating a Phase-Locked Frequency-Modulatable Carrier Frequency Signal

PRELIMINARY AMENDMENT

Assistant Commissioner For Patents
Washington, D. C. 20231

"EXPRESS MAIL" mailing label number EL645458115US I hereby certify that the Preliminary Amendment and the accompanying Application is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 § CFR 1.10 on the above-mentioned date and is addressed to the Assistant Commissioner of Patents, Box New Applications, Washington, DC 20231.


Allen B. Kroger

11/9/02
DATE

Sir:

Before examination of the above-identified patent application, please make the following amendments:

IN THE CLAIMS:

Please amend claims 1 and 2 as follows:

1. (Amended) A circuit assembly for generating a phase-locked frequency-modulatable carrier frequency signal comprising a voltage-controlled oscillator generating the carrier frequency signal as a function of a control signal, a phase detector which compares a reference frequency signal to a signal derived from the carrier frequency signal in phase therewith to thus produce the control signal so that the difference in phase between the signal derived from the carrier frequency signal and the

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reference frequency signal is zero, a reference frequency generator (36) having an output signal that is applied as the reference frequency signal directly to said phase detector (44), a mixer stage (30, 32, 38) for generating the derived signal which mixes a signal output from a digital frequency generator (16) for modulating by digital signals in its frequency with a signal generated by frequency division from the carrier frequency signal output by said voltage-controlled oscillator (50) so that a signal materializes whose frequency equals the reference frequency.

2. (Amended) The circuit assembly as set forth in claim 1, wherein said digital frequency generator (16) generates the signal modulatable in its frequency as a complex signal having two components 90° out of phase relative to each other, the two components after being converted into analog signals are applied to said mixer stage (30, 32, 38) in which a mixer unit (30, 32) is provided for each component, that one component each of a complex signal generated by a polyphase network (54) from the signal obtained from the carrier frequency signal by frequency division is applied to said mixer units, and that the output signals of said mixer units (30, 32) are combined for sideband suppression and the combined signal applied to said phase detector (44).

REMARKS

Entry and favorable action of the claims are earnestly solicited in light of the above amendments.

Applicants have amended the claims to place the claims in the appropriate form.

Early action on the merits is respectfully requested.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current preliminary amendment. The attached page is captioned "**Marked-up version to show changes.**"

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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Marked-up version to show changes:

What is claimed is:

1. (Amended) A circuit assembly for generating a phase-locked frequency-modulatable carrier frequency signal ~~including~~ comprising a voltage-controlled oscillator generating the carrier frequency signal as a function of a control signal, and a phase detector which compares a reference frequency signal to a signal derived from the carrier frequency signal in phase therewith to thus produce the control signal so that the difference in phase between the signal derived from the carrier frequency signal and the reference frequency signal is zero, ~~characterized in that~~ a reference frequency generator (36) ~~is provided whose~~ having an output signal that is applied as the reference frequency signal directly to said phase detector (44), ~~that for a mixer stage (30, 32, 38) for generating the derived signal a mixer stage (30, 32, 38) is provided~~ which mixes a signal output from a digital frequency generator (16) for modulating by digital signals in its frequency with a signal generated by frequency division from the carrier frequency signal output by said voltage-controlled oscillator (50) so that a signal materializes whose frequency equals the reference frequency.
2. (Amended) The circuit assembly as set forth in claim 1, ~~characterized in that~~ wherein said digital frequency generator (16) generates the signal modulatable in its frequency as a complex signal having two components 90° out of phase relative to each other, ~~that these~~ the two components after being converted into analog signals are applied to said mixer stage (30, 32, 38) in which a mixer unit (30, 32) is provided for each component, that one component each of a complex signal generated by a polyphase network (54) from the signal obtained from the carrier frequency signal by frequency division is applied to said mixer units, and that the output signals of said mixer units (30, 32) are combined for sideband suppression and the combined signal applied to said phase detector (44).